

AMENDMENTS TO THE SPECIFICATION

Page 8, paragraph beginning at line 8, should read:

The multiple valve 205 is a valve to communicate a specific channel to the pump unit 201. The multiple valve 205 is driven by a motor 206, and the aforementioned communication is successively switched by rotation. By operating the suction mechanism 201 and the multiple valve 205, the pressure inside of the channel connected to the nucleic acid capturing container 31 becomes negative via the chamber 204. Since a sample in the nucleic acid capturing container 31 is contained in a state such that it is mixed with various types of reagent, generally, it is in a highly viscous state. Thus, when the operation of the aforementioned pump unit 201 and the multiple valve 205 is initiated, the suction of a sample is not immediately initiated, and the sample remains until the negative pressure in the suction apparatus becomes not less more than a certain level. When the negative pressure in the suction apparatus becomes not more than a certain level, the sample is caused to pass through the carrier 32 for capturing nucleic acid (see Figs. 3 and 4), and is sucked into the suction mechanism. After the sample is sucked to a certain extent, it is possible to dispose of the sample using its own weight by halting the pump unit 201, since the channel from the chamber 204 to the multiple valve 205 has a sufficiently large internal diameter. This is also a desirable operation in terms of power saving. The internal diameter may be about ϕ 4, for example. In order to conduct suction in a shorter time, the pump unit 201 may be continuously operated until the suction of the sample in the nucleic acid capturing container 31 is finished.

Page 9, paragraph beginning at line 1, should read:

Fig. 9 schematically shows the multiple valve. The multiple valve 205 is a rotation valve, and is connected to chambers via a plurality of channels and to the pump via a single channel. The constitution of the multiple valve comprises a channel 307 for connecting the pump 201, a fixed valve 302 for connecting the channel 307, a rotation valve 303 connected to the motor ~~206~~ 301 via a rotation axis 306, and a fixed valve 304 having a multitude of switching channels 305 for each channel. The multiple valve 205 is driven by the motor ~~206~~ 301.

Page 9, paragraph beginning at line 9, should read:

Fig. 10 schematically shows the rotation valve 303. The rotation valve 303 has the channel 307 in communication with the fixed valve 304, and communicates between a given switching channel 305 and the channel 307 by rotation. By rotating the rotation valve via the motor ~~206~~ 301, each switching channel 305 can successively become in communication with the channel 307 in a time-sharing manner. In other words, by driving the multiple valve 205, the pump 201 instantaneously becomes in communication with each chamber 204. By driving the pump unit 201 in this state, each chamber can be continuously depressurized in a successive manner. Although this operation is conducted successively, the number of channels (chambers) communicating with the pump unit 201 is one at a given moment. Thus, the suction pressure of one channel (chamber) is not influenced by the state of other channels, so that each channel can be involved in suction using an equal pressure. Even when sample suction in one container is finished and the fluid resistance of the channel system thereof is substantially reduced, the suction of other channel systems is not

influenced. Thus, samples held in a plurality of containers can be sucked exhaustively. The multiple valve according to the present invention achieves an object function by repeated valve rotation to communicate with a specific channel. However, it is possible to realize the same function by disposing a valve, such as an electromagnetic valve, for example, in each channel.

Page 11, paragraph beginning at line 12, should read:

Further, in the present invention, the chamber 204 is disposed between the nucleic acid capturing container 31 and the multiple valve. This is because the suction of a sample could be conducted with a sufficient degree of margin by disposing a chamber whose capacity is larger than the volume of a sample. The suction of a channel including the chamber 204 is initiated by the operation of the pump unit 201. As mentioned above, since a sample in the nucleic acid capturing container 31 is contained in a state such that it is mixed with various types of reagent, generally, it is in a highly viscous state. Thus, when the operation of the aforementioned pump unit 201 and the multiple valve 205 is initiated, the suction of a sample is not immediately initiated, and the sample remains until the negative pressure in the suction apparatus becomes not more than a certain level. When the negative pressure in the suction apparatus becomes not ~~less~~ more than a certain level, the sample is caused to pass through the carrier 32 for capturing nucleic acid, and is sucked into the suction mechanism. In the process where the sample is being sucked, the pressure inside the channel gradually reaches atmospheric pressure. However, stable suction with a low degree of pressure fluctuation can be realized by employing a volume sufficiently larger than that of the sample for the channel.

Page 12, paragraph beginning at line 9, should read:

Waste fluid collected inside a single channel ~~34~~ is caused to communicate with the waste fluid container 210 by operating an electromagnetic valve 202 for waste fluid after the pump unit 201 is halted. The waste fluid is removed by its own weight, since the diameter of the channel merged in a singular manner is sufficiently large. Sufficient cross-section area is secured for a channel following the chamber, so that the sample naturally falls. Air blow can be conducted by connecting a pump for discharging to the top portion of the chamber in order to further actively cause the sample to fall.

Page 15, paragraph beginning at line 10, should read:

The first channel opening/closing valve 333 is driven by a first solenoid ~~343~~ 43 and can simultaneously control the communication between each nucleic acid capturing container 31 and each chamber 204. Also, the second channel opening/closing valve 334 is driven by a second solenoid ~~344~~ 44 and can simultaneously control the communication between each chamber 204 and the location where the channels are joined. In both valves, the concrete structures thereof, for example, are the same as the channel opening/closing valve in embodiment 2. Moreover, they can have a structure such that they each conduct communication control.

Page 15, paragraph beginning at line 29, should read:

After the suction pump 201 is halted, the ~~first~~ second channel opening/closing valve is closed. Then, the ~~second~~ first channel opening/closing valve is opened and the sample is sucked into the chamber 204.

Page 16, paragraph beginning at line 3, should read:

Thereafter, the first channel opening/closing valve is closed, the second channel opening/closing valve is opened, and the suction pump ~~206~~ 201 is driven. Whereby, the sample in the chamber 204 is sucked and removed, and the chamber 204 is emptied.

Page 16, paragraph beginning at line 7, should read:

Finally, the suction pump ~~206~~ 201 is halted and the second channel opening/closing valve ~~344~~ 334 is closed, thereby completing the suction operation.

Page 16, paragraph beginning at line 19, should read:

In the present embodiment, the chambers 204 are separately disposed for a plurality of nucleic acid capturing containers 31. Channels from each chamber 204 are joined into a single channel and the channel is in communication with the suction pump 201. A channel opening/closing valve 433 for enabling the control of communication is disposed between the nucleic acid capturing container 31 and the

chamber 204. Also, a check valve that opens only in the direction leading from the chamber 204 to the suction pump 201 is disposed between the chamber 204 and a location where the channels are joined.

Page 17, paragraph beginning at line 8, should read:

First, the channel opening/closing valve ~~443~~ 433 is closed and the chamber 204 is set in a state where depressurization becomes possible. Then, the inside of each chamber is depressurized by driving the suction pump 201. Thereafter, while the pump unit 201 is being driven, the channel opening/closing valve 433 is opened and the suction of a sample in the container 31 is initiated. Since a liquid flows only in a single direction, the check valve, in this case, can maintain pressure necessary for suction in each channel even if a pressure difference is generated as a result of the characteristics of a sample.